

### **REMARKS**

By this amendment claim 8 has been amended. Accordingly, claims 1-8 and 13-22 remain pending in this application. No new matter has been added. Applicant requests the prompt re-examination and allowance of this application.

#### **Claim Objections**

In the Office Action mailed April 17, 2006 ("the Office Action"), the objection of claim 8 was maintained. Specifically, claim 8 was objected to as allegedly having insufficient antecedent basis for "a second impact absorbing device" because there is no mention of a first impact absorbing device in claim 8 or claim 1, from which claim 8 depends. Although Applicant respectfully maintains that the term "second impact absorbing device" is reasonably ascertainable and thus claim 8 and thus is not indefinite, see e.g. MPEP § 2173.05(e), Applicant has amended claim 8 as respectfully requested by the Examiner. The amendment to claim 8 merely rewords the limitations inherent in claim 8. Accordingly, Applicant respectfully requests the objection to claim 8 be withdrawn.

#### **Anticipation Rejections**

In the Office Action, claims 1, 3-5, 7, 8, 13-16, 18-20, and 22 were rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 4,084,557 to Luria ("Luria"). Applicant respectfully traverses this rejection. A proper anticipation rejection requires each and every element set forth in the claim to be found in a single prior art reference. See MPEP § 2131. The anticipation rejection set forth in the Office Action does not properly establish that each and every claimed element is closed in Luria.

Luria discloses in line 66 of column 3 to line 12 of column 4 and in Fig. 1, an internal combustion engine including an intake valve 8, a first cam 12, and a second cam 34, wherein the first cam 12 controls the opening of the valve 8 and the first and second cams 12, 34 control the closing of the valve 8. The first cam 12 acts via a follower 16, a push rod 18, and a rocker arm 20 to open the valve 8 by overcoming a spring biasing the valve 8 to a closed position. See Fig. 1 of Luria. The second cam 34 engages the rocker arm 20 when its rotational phase is shifted out of phase with that of the first cam 12 and overcomes the spring bias urging the valve 8 to the closed position. Luria further discloses in lines 13 to 54 of column 4 and in Fig. 2, an arrangement for driving a cam shaft 32 of the second cam 34 and adjusting the rotational phase of the second cam 34 with respect to the first cam 12.

Regarding independent claims 1 and 13, Luria fails to disclose, *inter alia*, a valve actuation system comprising an engine valve moveable between a first position and a second position, a cam follower, a first cam adapted to engage the cam follower to move the engine valve, and a second cam adapted to engage the cam follower to affect movement of the engine valve. As set forth above, Luria discloses that the first cam 12 acts on the rocker arm 20 via the push rod 18 and does not engage the rocker arm 20. Additionally, Luria discloses that the second cam 34 engages the rocker arm 20 and does not engage the cam follower 16 that the first cam 12 engages. Although Luria discloses first and second cams, the first and second cams 12, 34 are adapted to engage different cam followers, e.g., the cam follower 16 and the rocker arm 20, respectively. Accordingly, Applicant submits that independent claims 1 and 13 are

allowable for at least this reason. Claims 3-5, 7, 8, 14, and 15 depend from either claim 1 or claim 13 and are also allowable for this reason as well as for their additional features.

Regarding independent claim 16, Luria fails to disclose, *inter alia*, an engine comprising an engine valve, a cam follower, a first cam adapted to engage the cam follower such that rotation of the first cam acts to move the engine valve from a first position to a second position during a first lift period, a second cam adapted to selectively engage and disengage the cam follower such that the rotation of the second cam acts to affect the movement of the engine valve from the first position to the second position during a second lift period. As set forth above with respect to independent claims 1 and 13, Luria discloses that the first and second cams 12, 34 are adapted to engage different cam followers, e.g., the cam follower 16 and the rocker arm 20, respectively. Accordingly, Applicant submits that independent claim 16 is allowable for at least this reason. Claims 18-20 and 22 depend from claim 16 and are also allowable for this reason as well as for their additional features.

### **Obviousness Rejections**

In the Office Action, claims 2 and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Luria in view of U.S. Patent No. 4,708,101 to Hara et al. ("Hara") and claims 6 and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Luria. Applicant respectfully traverses these rejections. A proper *prima facie* case of obviousness requires, *inter alia*, that the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP § 2142.

Hara discloses in Figs. 8(A) to 10 and in line 34 of column 4 to line 36 of column 5, a driving apparatus for an engine valve including a driving cam 13 fixed to a cam shaft 14, a rocker arm 15, one end of which contacts the driving cam 13 and the other end of which engages an intake valve 12. Hara also discloses a lever 16 which engages a control cam 17 and contacts the back surface of the rocker arm 15 to create a fulcrum. During operation of the driving apparatus, rotation of the driving cam 13 pivots the rocker 15 about the fulcrum to lift the intake valve 12. Rotation of the control cam 17 moves the lever 16 to adjust and establish the position of the fulcrum of the rocker arm 15. Adjusting the position of the fulcrum serves to vary the amount of displacement of the rocker arm 15 caused by the driving cam 13 and thus affects the extent of movement of the intake valve 12.

Regarding claims 2 and 17, Hara was relied upon to teach a phase shifting mechanism including a helical spline and a hydraulic actuator. However, the teachings of Hara and the alleged modification of Luria in view thereof do not cure the deficiencies noted above with respect to Luria. Namely, Luria discloses that the first and second cams 12 and 34 are adapted to engage different cam followers. Accordingly, Applicant submits that claims 2 and 17 are allowable for at least this reason.

Regarding claims 6 and 21, the Office Action seemingly takes Official Notice that adding an additional rocker arm or cam follower with a push rod is well within one of ordinary skill in the art in view of space and other engine conditions. Regardless of the apparent Official Notice and the alleged modification of Luria to include an additional rocker arm or cam follower, such modifications do not cure the deficiencies noted above with respect to Luria. Specifically, Luria discloses that the first and second cams 12 and

34 are adapted to engage different cam followers. Accordingly, Applicant submits that claims 6 and 21 are allowable for at least this reason.

### **Examiner's Response to Arguments**

Although Applicant declines to subscribe to any characterization of the applied art set forth in the Office Action, Applicant appreciates the Examiner's comments on page 6 of the Office Action regarding Applicant's remarks on the bottom of page 10 and top of page 11 of the Reply to Final Office Action filed March 29, 2006. Applicant hereby takes the opportunity to clarify such remarks, namely, to clarify the several statements that the first and second cams 12 and 34 of Luria rotate a cam follower, i.e., the rocker arm 20, in the same direction. Such statements were made with respect to the alleged modification of Hara in view of Luria as set forth in the Office Action mailed January 17, 2006 and, in particular, were made to illustrate that such a modification would not cure the deficiencies of Hara. Specifically, Hara discloses that the control cam 17 moves the lever 16 to establish the position of the fulcrum of rocker arm 15 and thus cannot rotate the rocker arm 15 about the established fulcrum and Luria discloses first and second cams 12 and 34 which both rotate the rocker arm 20 about a pivot. Applicant regrets any confusion such statements may have regarding the characterization of the prior art.

### **Conclusion**

In view of the above, Applicant respectfully submits that claims 1-8 and 13-22 are in condition for allowance. Accordingly, Applicant respectfully requests reconsideration and re-examination of this application and timely allowance of the claims 1-8 and 13-22.

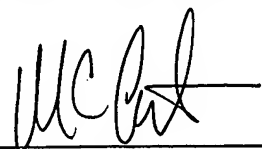
The Office Action contains characterizations of the claims and the related art, with which Applicant does not necessarily agree. Unless expressly noted otherwise, Applicant declines to subscribe to any statement or characterization in the Office Action.

If the Examiner believes a telephone conversation might advance prosecution, the Examiner is invited to call Applicant's undersigned representative at 202-408-4397

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account no. 06-0916.

Respectfully submitted,  
FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: July 12, 2006

By:   
\_\_\_\_\_  
Timothy P. McAnulty  
Reg. No. 56,939